



# SPEC® CINT2006 Result

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## Fujitsu

SPECint®\_rate2006 = 686

PRIMERGY CX2550 M1, Intel Xeon E5-2630 v3, 2.4 GHz

SPECint\_rate\_base2006 = 658

CPU2006 license: 19

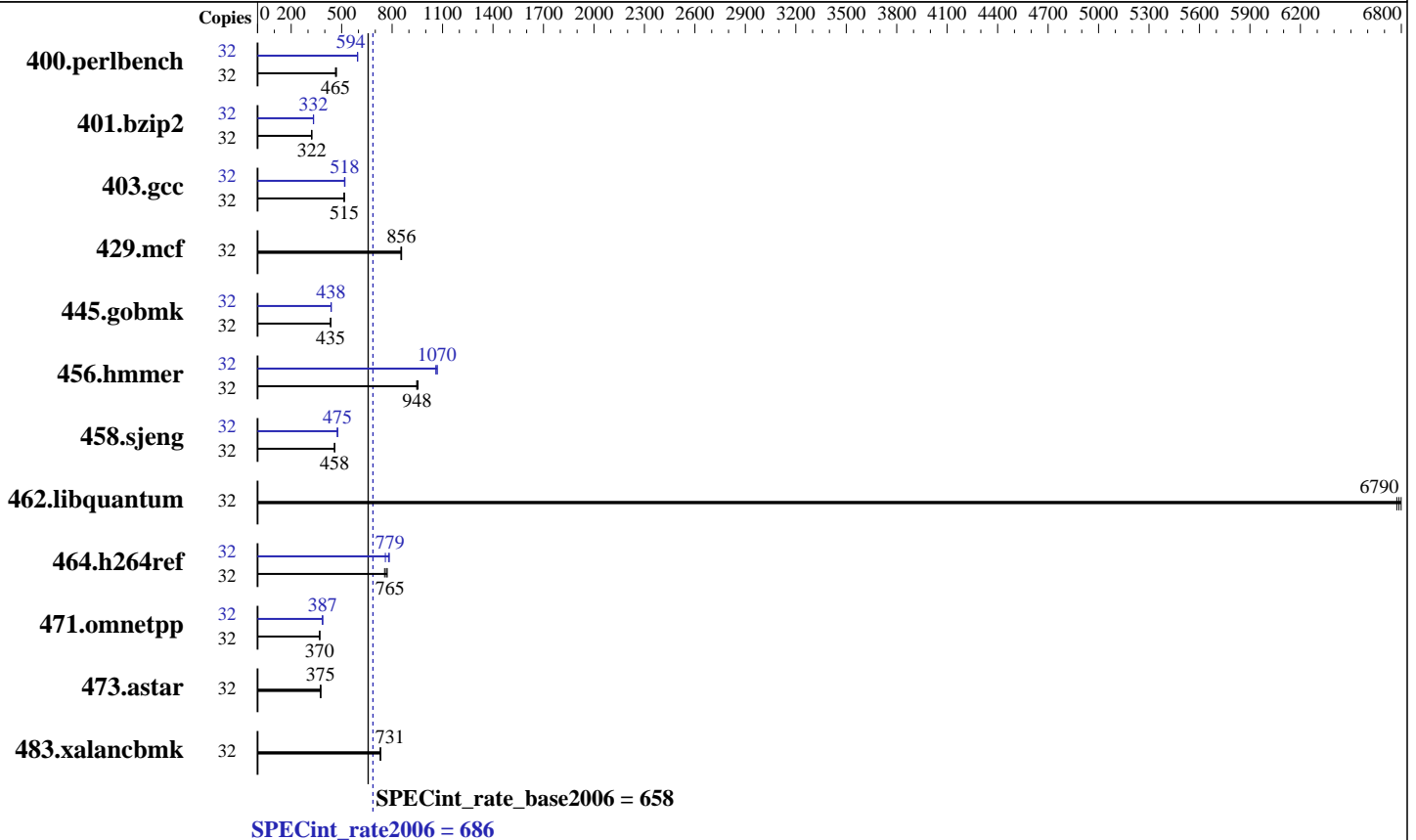
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Nov-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014



### Hardware

CPU Name: Intel Xeon E5-2630 v3  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core  
 CPU(s) orderable: 1,2 chip  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 256 KB I+D on chip per core  
 L3 Cache: 20 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R, running at 1866 MHz)  
 Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 7.0 (Maipo)  
 Kernel 3.10.0-123.8.1.el7.x86\_64  
 Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux  
 Auto Parallel: No  
 File System: xfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V10.0



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## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	32	666	469	673	464	<b><u>673</u></b>	<b><u>465</u></b>	32	526	594	526	595	<b><u>526</u></b>	<b><u>594</u></b>
401.bzip2	32	959	322	960	322	<b><u>959</u></b>	<b><u>322</u></b>	32	<b><u>929</u></b>	<b><u>332</u></b>	927	333	931	332
403.gcc	32	499	516	<b><u>500</u></b>	<b><u>515</u></b>	501	514	32	<b><u>497</u></b>	<b><u>518</u></b>	499	517	496	520
429.mcf	32	343	852	<b><u>341</u></b>	<b><u>856</u></b>	341	856	32	343	852	<b><u>341</u></b>	<b><u>856</u></b>	341	856
445.gobmk	32	773	434	<b><u>772</u></b>	<b><u>435</u></b>	772	435	32	767	438	<b><u>767</u></b>	<b><u>438</u></b>	767	437
456.hammer	32	315	947	313	954	<b><u>315</u></b>	<b><u>948</u></b>	32	280	1070	282	1060	<b><u>280</u></b>	<b><u>1070</u></b>
458.sjeng	32	844	459	<b><u>846</u></b>	<b><u>458</u></b>	846	458	32	815	475	815	475	<b><u>815</u></b>	<b><u>475</u></b>
462.libquantum	32	97.9	6770	<b><u>97.7</u></b>	<b><u>6790</u></b>	97.5	6800	32	97.9	6770	<b><u>97.7</u></b>	<b><u>6790</u></b>	97.5	6800
464.h264ref	32	<b><u>925</u></b>	<b><u>765</u></b>	918	771	938	755	32	<b><u>909</u></b>	<b><u>779</u></b>	932	760	904	783
471.omnetpp	32	542	369	541	370	<b><u>541</u></b>	<b><u>370</u></b>	32	517	387	518	386	<b><u>517</u></b>	<b><u>387</u></b>
473.astar	32	596	377	<b><u>599</u></b>	<b><u>375</u></b>	602	373	32	596	377	<b><u>599</u></b>	<b><u>375</u></b>	602	373
483.xalancbmk	32	<b><u>302</u></b>	<b><u>731</u></b>	303	730	302	731	32	<b><u>302</u></b>	<b><u>731</u></b>	303	730	302	731

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

## Platform Notes

BIOS configuration:  
Energy Performance = Performance  
Utilization Profile = Unbalanced  
QPI snoop mode: Home Snoop  
COD Enable = Disabled, Early Snoop = Disabled  
CPU C1E Support = Disabled

## General Notes

Environment variables set by runspec before the start of the run:  
LD\_LIBRARY\_PATH = "/home/SPECcpu2006/libs/32:/home/SPECcpu2006/libs/64:/home/SPECcpu2006/sh"

Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB memory using RedHat EL 7.0

Filesystem page cache cleared with:  
echo 1> /proc/sys/vm/drop\_caches

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## General Notes (Continued)

runspec command invoked through numactl i.e.:  
numactl --interleave=all runspec <etc>

This result was measured on the PRIMERGY CX2550 M1. The PRIMERGY CX2550 M1 and the PRIMERGY CX2570 M1 are electronically equivalent.  
For information about Fujitsu please visit: <http://www.fujitsu.com>

## Base Compiler Invocation

C benchmarks:

icc -m32 -L/opt/intel/composer\_xe\_2015/lib/ia32

C++ benchmarks:

icpc -m32 -L/opt/intel/composer\_xe\_2015/lib/ia32

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/sh -lsmartheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32 -L/opt/intel/composer\_xe\_2015/lib/ia32

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## Peak Compiler Invocation (Continued)

400.perlbench: `icc -m64`

401.bzip2: `icc -m64`

456.hmmer: `icc -m64`

458.sjeng: `icc -m64`

C++ benchmarks:

`icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32`

## Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64`

401.bzip2: `-DSPEC_CPU_LP64`

456.hmmer: `-DSPEC_CPU_LP64`

458.sjeng: `-DSPEC_CPU_LP64`

462.libquantum: `-DSPEC_CPU_LINUX`

483.xalancbmk: `-DSPEC_CPU_LINUX`

## Peak Optimization Flags

C benchmarks:

400.perlbench: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -auto-ilp32`

401.bzip2: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch -auto-ilp32 -ansi-alias`

403.gcc: `-xCORE-AVX2 -ipo -O3 -no-prec-div`

429.mcf: `basepeak = yes`

445.gobmk: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias`

456.hmmer: `-xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32`

458.sjeng: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto-ilp32`

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## Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes

464.h264ref: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs  
-L/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.

Report generated on Wed Jan 14 10:27:47 2015 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 13 January 2015.